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09/896,388

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Joachim P. Walser

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EXAMINER

SHERR, CRISTINA O

ART UNIT

PAPER NUMBER

3621

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/896,388	<b>Applicant(s)</b> WALSER ET AL.	
	<b>Examiner</b> CRISTINA OWEN SHERR	<b>Art Unit</b> 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 50-71 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,6,8,10,11,14,16,18,19,22,24,26,27 and 50-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 7, 9, 12, 13, 15, 17, 20, 21, 23, and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is in response to applicants' amendment filed December 27, 2007. Claims 1-26, and 50-71 are currently pending in this case. Claims 6, 14, and 26-27, and 50-71 had been previously withdrawn from further consideration. In the latest amendment, claims 1, 9, 17, and 25 have been amended. Claims 1, 4, 5, 7, 9, 12, 13, 15, 17, 20, 21, 23, and 25 are currently under examination.

#### Acknowledgements

2. In response to the requirement for election of species mailed on December 7, 2007, Applicants have elected species a (claims 1, 4, 5, 7, 9, 12, 13, 15, 17, 20, 21, 23, and 25) with traverse. We further note that Applicants have designated claims 1, 9, 17, and 25 as generic. (Examiner had noted no claim is generic "at this time", thus leaving that choice to the Applicants).
3. Applicants' argument is essentially, that the claims have already been examined, prior to the Request for Continued Examination filed on October 4, 2007, thus there is no burden to Examiner in examining the claims.
4. Examiner respectfully disagrees and notes that, firstly, the claims have been significantly amended, thus requiring further search and consideration *de novo*. Should Applicants expressly state on the record that the groups of inventions are not patentably distinct after each and every claim amendment submitted and provide appropriate evidence in support thereof, the Examiner may reconsider the restriction in light of the amended claims and Applicants' evidence.

Art Unit: 3621

5. However, based upon the claims as currently filed and because Applicants have failed to argue that the groups of inventions are not patentably distinct, the requirement is still deemed proper and is therefore made FINAL.

6. Applicant's argue that the claims in each species, (allegedly, according to MPEP 808.02 and 809.02(a)) should have been identified by the Examiner. This requirement is not found in the MPEP with respect to a requirement for election of species (unlike a requirement for restriction).

7. Thus claims 2, 3, 6, 8, 10, 11, 14, 16, 18, 19, 22, and 24 are hereby withdrawn from further examination.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1, 4, 5, 7, 9, 12, 13, 15, 17, 20, 21, 23, and 25 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3621

10. Claims 1, 4, 5, 7, 9, 12, 13, 15, 17, 20, 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anandalingam, "Hierarchical Optimization: An Introduction" (hereinafter Anandalingam).

11. Regarding claim 1-

Anandalingam discloses a method for generating set of constraints, the method comprising generating a transition graph comprising a plurality of stages, each stage representing a time interval and comprising one or more states and a plurality of paths, each path comprising a plurality of states, each state having a value, an inventory value, and a state value, the transition graph being generated by repeating the following for a the plurality of stages until a final stage is reached: determining the value of a successor state; calculating the inventory value of the successor state using the value and the inventory value of a predecessor state; and calculating the state value of the successor state using the value of the predecessor state; selecting a path of the plurality of paths according to the state values of the one or more states; and determining a schedule from the selected path. (e.g. pg 1, pg 2, noting that a hierarchical optimization involves repeating for K levels an optimization of each level, the constraints of one level being the start of the next level).

12. But Anandalingam fails to explicitly disclose:

That the optimization is for a pricing plan.

That the model represents a pricing plan problem for an item group comprising a plurality of items.

Art Unit: 3621

That the optimization is used to generate an optimized pricing plan, the optimized pricing plan associating a price with each item of the item group.

13. However, the Examiner took Official Notice in the previous Office Action that it is well known to use mathematical optimization models to determine the pricing of items. Models are formulas that take input numbers and generate output numbers. The formulas themselves do not need to change based upon what the intended use of the formula is, only the input numbers. The use of a model yields predictable results no matter how the user characterizes the inputs. Therefore, it would have been obvious to a person having ordinary skill in the art to use the known method of hierarchical optimization, as disclosed in Anandalingam, for the purpose of optimizing prices of items because the known method of hierarchical optimization would improve the prices of the items in a predictable way. The optimized prices would help to increase profits.

14. Regarding claims 4, 5, and 7 -

Anadilangam fails to explicitly disclose wherein selecting the path according to the state values comprises: determining a state at the final stage having a state value; and determining a path comprising a state of an initial stage and the state having the optimal state value and further comprising eliminating a successor state in response to a constraint; and determining a state at the final stage having a certainty value of a predetermined value.

15. However, the Examiner takes Official Notice that it is old and well known in the art to factor in variations over time while modeling data.

Art Unit: 3621

16. Therefore, it would have been obvious to a person having ordinary skill in the art to add in time constraints as one of the constraints in Anandalingam, for the purpose of making the model a more accurate depiction of reality.

17. Regarding claim 9 –

Claim 9 is rejected under the same criteria as claim 1.

18. Regarding claims 12, 13, and 15 –

Claims 12, 13, and 15 are rejected under the same criteria as claims 1,4, 5, and 7.

19. Regarding claim 17 –

Claim 17 is rejected under the same criteria as claim 1.

20. Regarding claims 20, 21, and 23 –

Claims 20, 21, and 23 are rejected under the same criteria as claims 1,4, 5, and 7.

21. Regarding claim 25 –

Claim 25 is rejected under the same criteria as claim 1.

22. Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

***Conclusion***

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

24. Gold et al. (US 2002/0032610) disclose the generation of a price based upon various predetermined rules.

25. Reuhl et al. (US 5,873,069) disclose a system for automatic updating and display of retail prices. Prices can vary by market and location.

26. Wijaya et al. (US 7,233,914) disclose substitution rules linking the price of one item to another.

27. Ratliff et al. (US 2003/0191725) disclose the modification of the price of one item based upon the price of another item.

28. Berkovitz et al. (US 200310023567) disclose a method for dynamic pricing, including the rounding of prices.

29. McEwen et al. (US 2002/0107818) disclose a system for expression-based pricing, including pricing relationships.

30. Ouimet (US 7,020,617) discloses a strategic planning and optimization system that optimizes based upon a primary goal, then optimizes based upon auxiliary goals.

31. Price et al. (US 2002/0082881) disclose a system providing dynamic pricing.

32. Eder (US 5,615,109) discloses a method of generating feasible, profit maximizing requisition sets using multi objective linear programming techniques. Impacts of changes are also reflected.



Art Unit: 3621

33. Corynen (US 6,735,596) discloses a global system optimization method using sequential multi objective decision problems.

34. Ue-Pyng Wen & Shuh-Tzy Hsu, "Linear Bi-level Programming Problems - A Review," 42 J. Operational Research Society 125 (1991) provide an overview of the well known multi-level programming case of bi-level programming.

35. Stephen J. Hoch, et al., "Determinants of Store-Level Price Elasticity," 32 J. Marketing Research, 17 (1995) provides a model for calculating price elasticity according to demand.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRISTINA OWEN SHERR whose telephone number is (571)272-6711. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Fischer can be reached on (571)272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

Art Unit: 3621

free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

Cristina Owen Sherr

/ANDREW J. FISCHER/

Supervisory Patent Examiner, Art Unit 3621